

Female Pelvis



Dr. Rania Sherif
Ass. Prof. of Anatomy, PNU

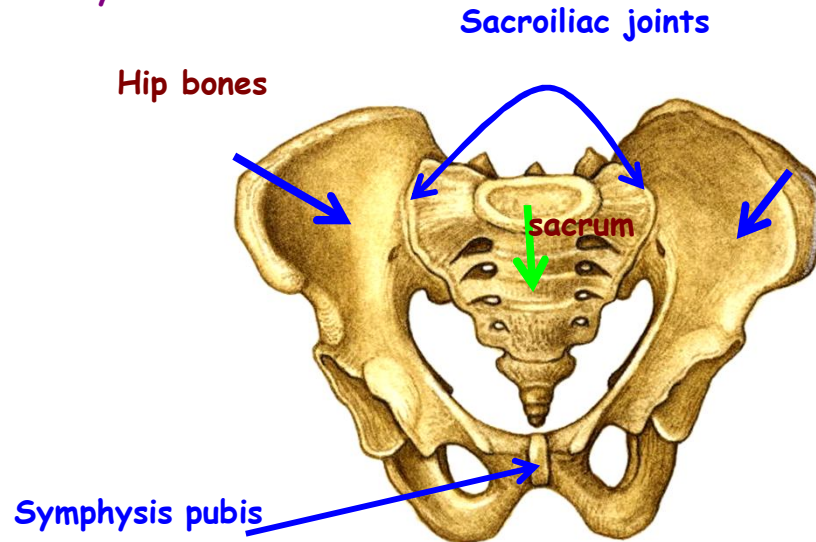
Dr. Rania

Learning Objectives

- Describe structure of Bony pelvis
- Differentiate () ♀ & ♂ pelvis
- Describe Muscles lining the pelvis
- Describe arrangement of pelvic viscera
- Determine clinical problems related to pelvis

Dr. Rania

Pelvic cavity lies Behind & below abdominal cavity.

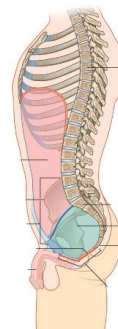


Pelvic cavity lies Behind & below abdominal cavity.

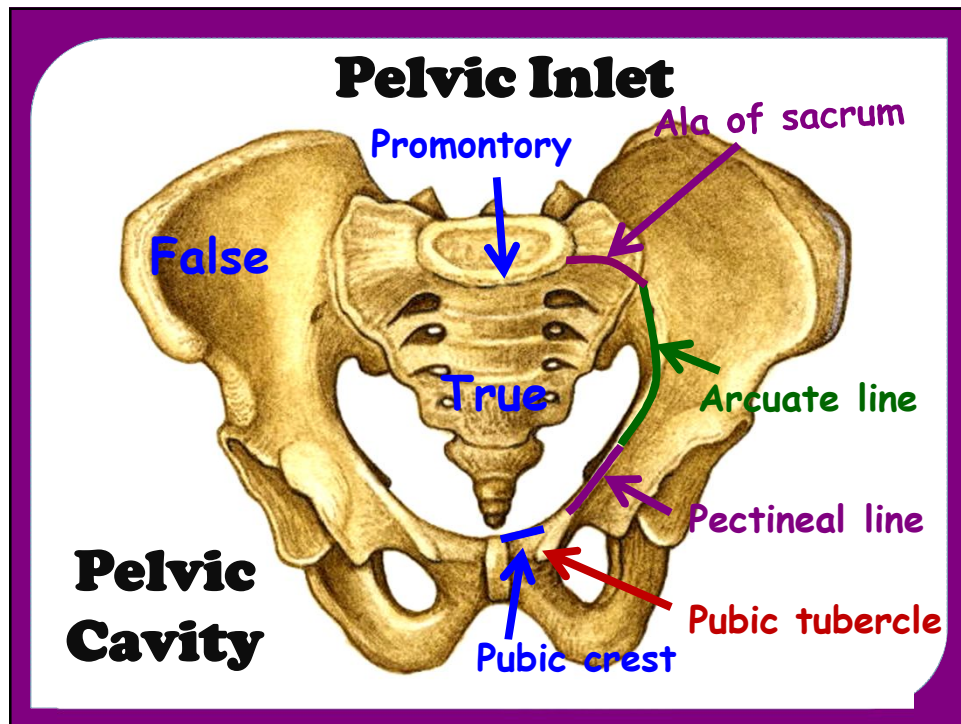
Skeleton of the pelvis consists of 2 hip bones & sacrum.

Hip bone articulates with the sacrum at the sacroiliac joint

2 hip bones articulate at the symphysis pubis



Dr. Rania



Pelvic inlet separates true pelvis from false pelvis

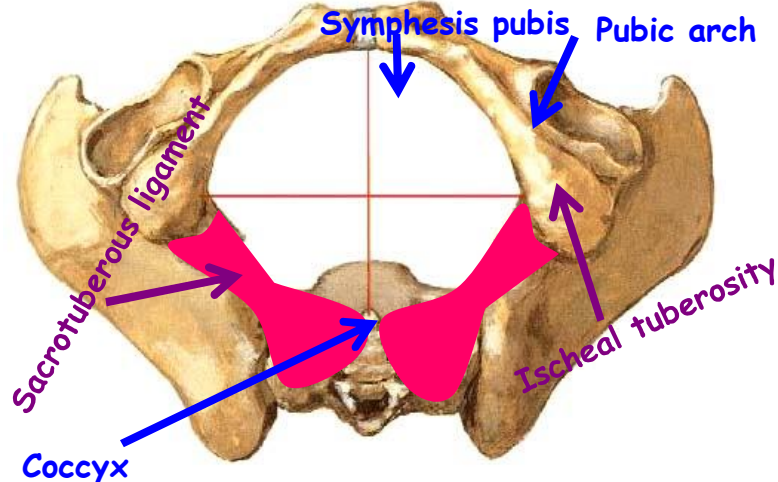
Pelvic inlet is formed by:

- Symphysis pubis
- Pubic crest
- Pubic tubercle
- Pectineal line
- Arcuate line
- Ala of the sacrum
- Promontory of the sacrum

Pelvic cavity consists of the pelvic surface of ilium, ischium and pubis and the sacrum

Dr. Rania

Pelvic outlet



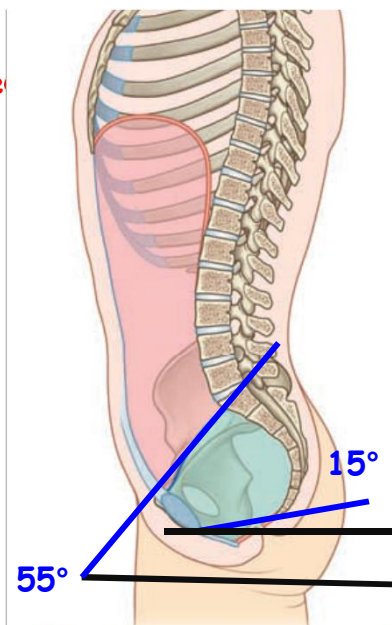
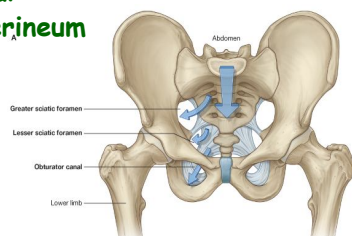
Pelvic outlet is bounded by:
Symphysis pubis, Pubic arch, Ischeal tuberosity
Sacrotuberous ligament, coccyx

Orientation of pelvis:

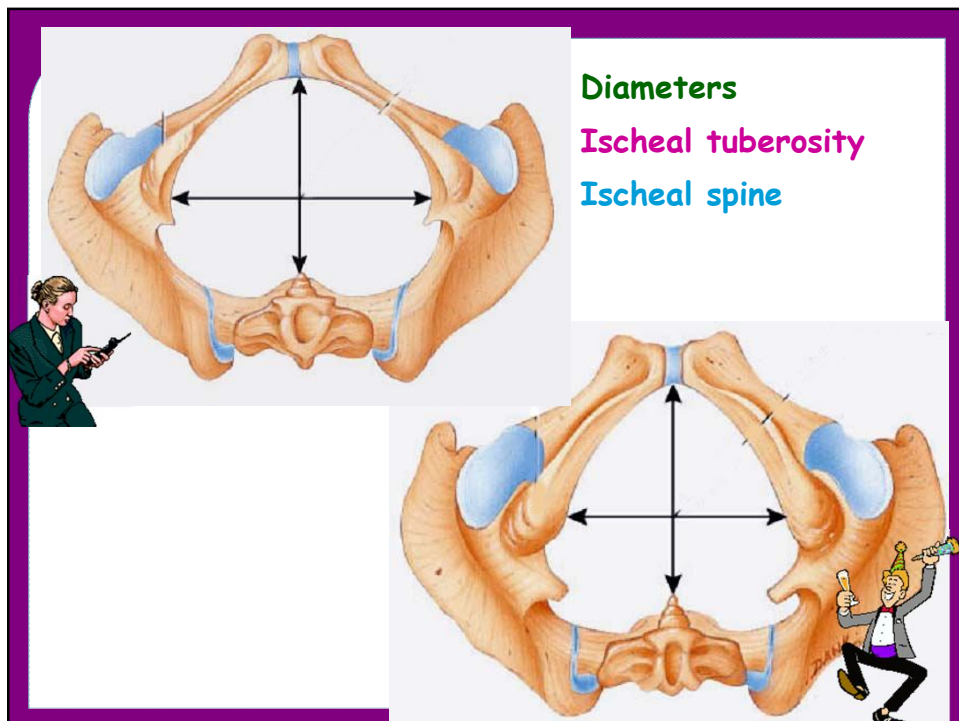
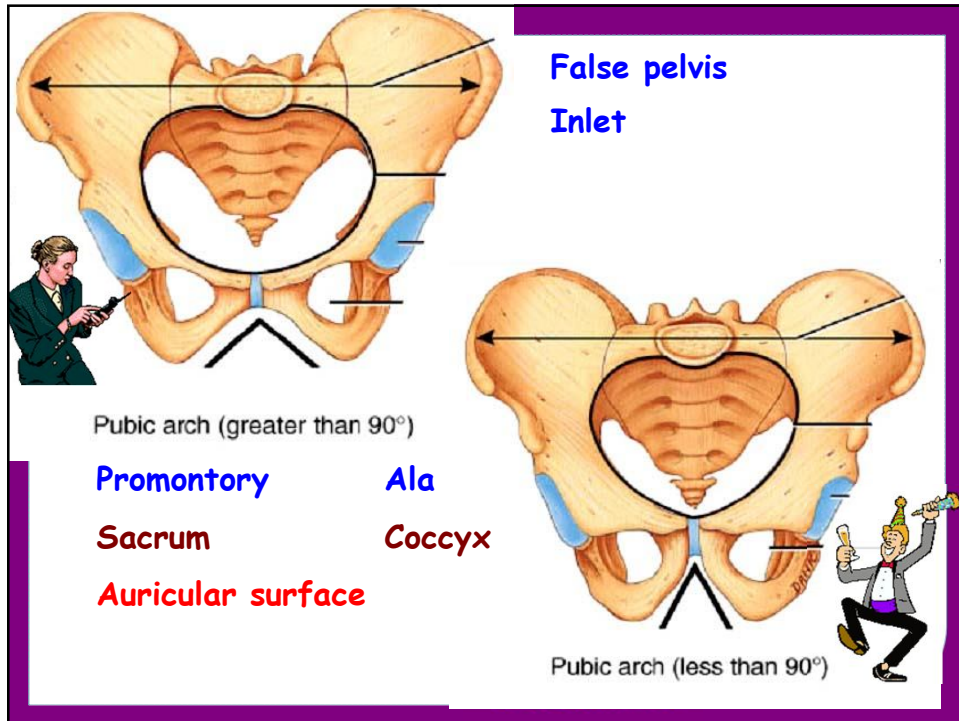
The plane of pelvis inlet is tilted by 55° in relation to horizontal plane while that of outlet is tilted by 15°

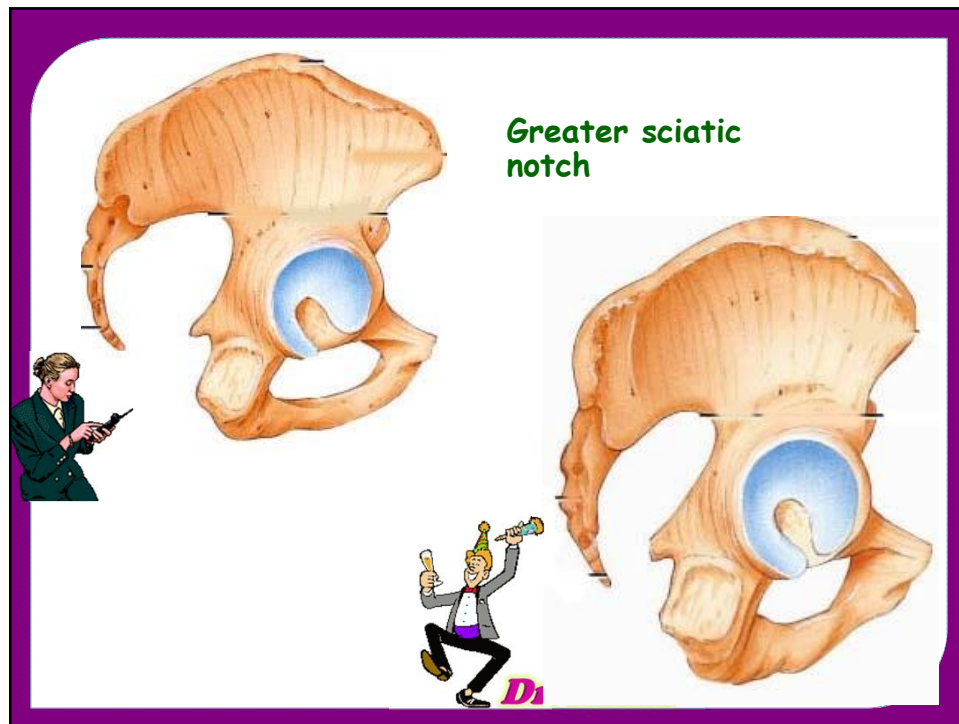
Pelvis is connected with:

- ❖ Abdomen
- ❖ Gluteal region: through greater & lesser sciatic foramina
- ❖ Lower limb: through obturator canal
- ❖ Perineum



Dr. Rania





	Female	Male
Bones	Less heavy	More heavy
Pelvic inlet	oval	Heart shape or triangular
Promontory	Less projected	More projected
Ala	Wide	Narrow
Sacrum	Short, wide	Long, narrow
Coccyx	Movable	Less movable
Subpubic angle	more than 90	Less than 90
Auricular surface	Reach S2	Reach S3
Pelvic cavity	Short, wide	Long, narrow
Pelvic diameters	Longer	Shorter
Ischeal tuberosity	Everted	Less everted
Ischeal spines	Blunt	More projected inward
Greater sciatic notch	Wide, shallow	Narrow, deep

Dr. Nanda

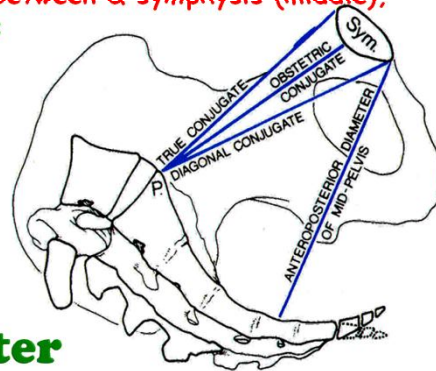
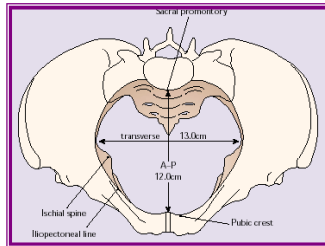
Diameters of pelvic Inlet

True conjugate: distance between promontory & symphysis (upper border)

Diagonal conjugate: distance between & symphysis (lower border),

Obstetrical conjugate: distance between & symphysis (middle),

Transverse: () farthest 2 points



Midpelvis diameter

Antro-Posterior diameter: is the distance between lower border of symphysis pubis & middle of sacrum

Dr. Rania

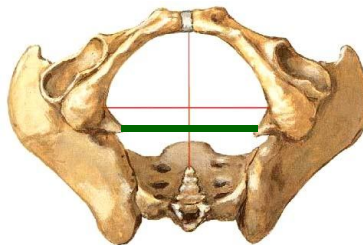
Diameters of pelvic Outlet

Anatomical antro-posterior diameter: () symphysis & coccyx (lower border)

Obstetric antro-posterior diameter: () symphysis & sacrum (lower border)

Anatomical transverse diameter: Intertuberous D.

Obstetric transverse diameter: Interspinous D.



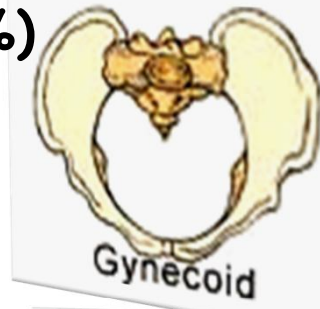
Contracted pelvis: pelvis with narrow diameters

Dr. I

Gynecoid pelvis (50%)

Normal female:

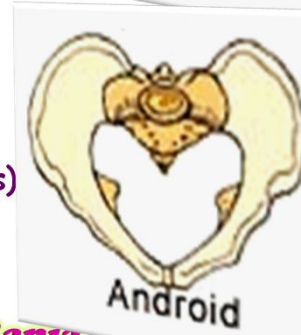
- ❖ Inlet: transverse oval
- ❖ Sacrum: wide.
- ❖ Ischial spines: blunt
- ❖ Gre. Sciatic notch: wide
- ❖ Subpubic angle: is 90-100°.



Android pelvis (20%)

Male type :

- Inlet: Δ or heart-shaped
- Side walls: converging (funnel pelvis)
- Ischial spines: projecting.
- Gre. sciatic notch: narrow.
- Subpubic angle: $< 90^\circ$.

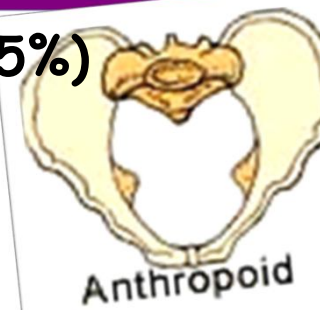


Dr. Rania

Anthropoid pelvis (25%)

Ape-like:

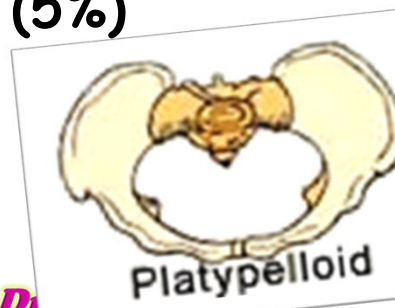
- ❖ Anteroposterior diam.: long
- ❖ Transverse diam.: short
- ❖ Sacrum: long and narrow.
- ❖ Gre-sciatic notch: wide.
- ❖ Subpubic angle: narrow



Platypelloid pelvis (5%)

Flat female type :

- Anteroposterior diam.: short
- Transverse diam.: are long.
- Gre-sciatic notch: narrow.
- Subpubic angle: wide.



Dr.

1- Sacrotuberous ligament:-

Attachment:

Ischeal tuberosity & ramus of ischium: medial margin

Sacrum & coccyx: lateral surface & back

Posterior superior iliac spine & posterior inferior iliac spine

Function: Fix sacrum in oblique direction

2- Sacrospinous ligament:-

Attachment: Ischeal spine & lat border of sacrum & coccyx

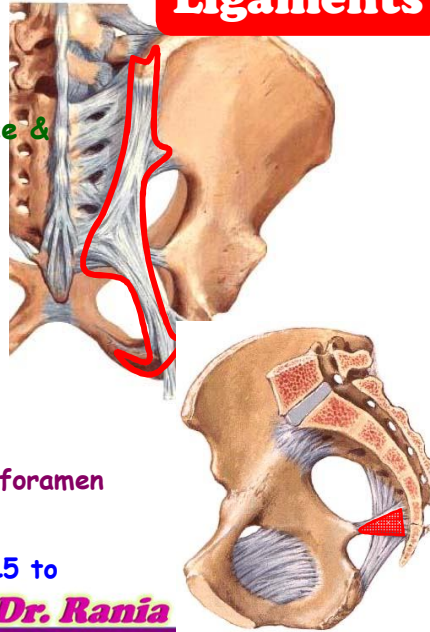
3- Obturator membrane:-

Attached to Margins of obturator foramen

4- Iliolumbar ligament:

Attached to trasverse process of L5 to sacrum and iliac crest

Ligaments



Dr. Rania

Sacroiliac joint:-

Articulation between auricular surfaces of sacrum & hip bone

Its type is plane synovial (modified)

Important ligament: Interosseus sacroiliac lig: strongest one

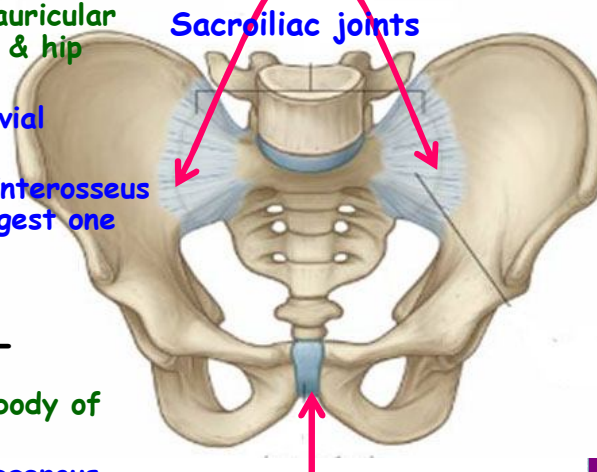
Symphysis pubis:-

Articulation between body of pubis

Its type is 2ry cartilagenous

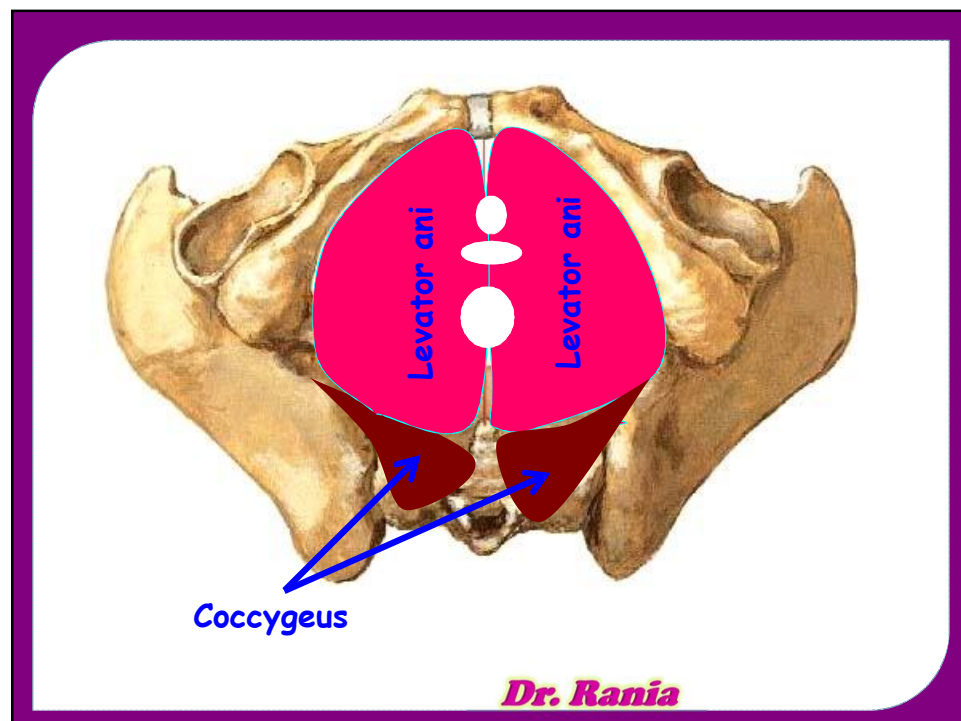
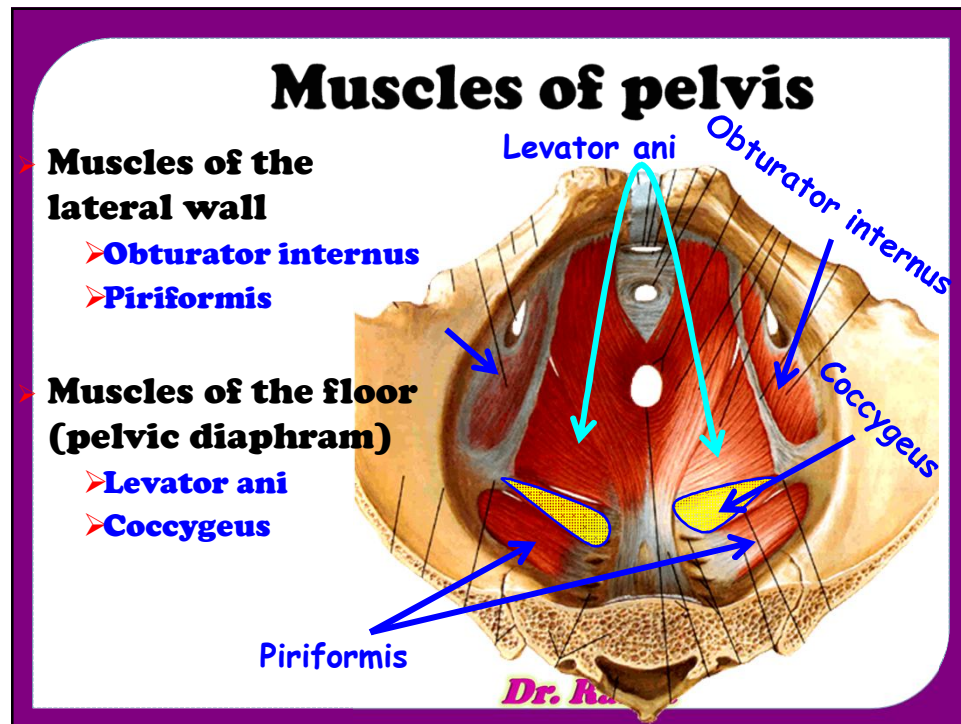
Important ligaments: superior & inferior ligaments

Joints



Symphysis pubis

Dr. Rania



Levator ani ms:

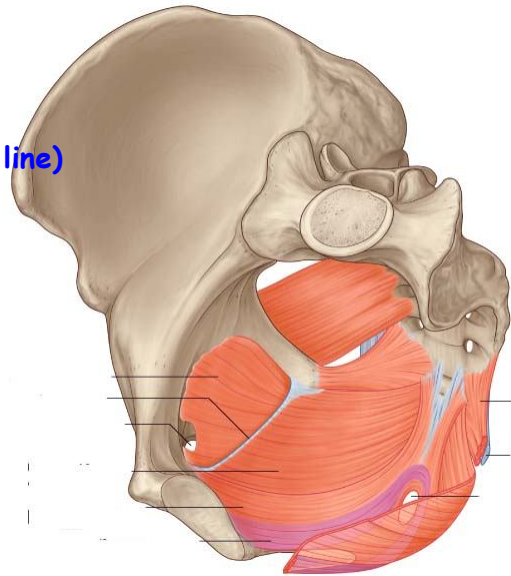
origin

back of pubis

Obturator fascia (white line)

Ischeal spine

Insertion:



Dr. Rania

Levator ani ms:

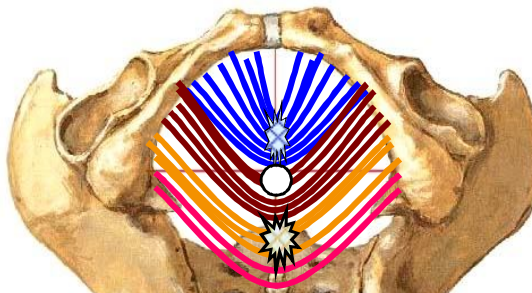
Insertion:

Perineal body

Anal canal

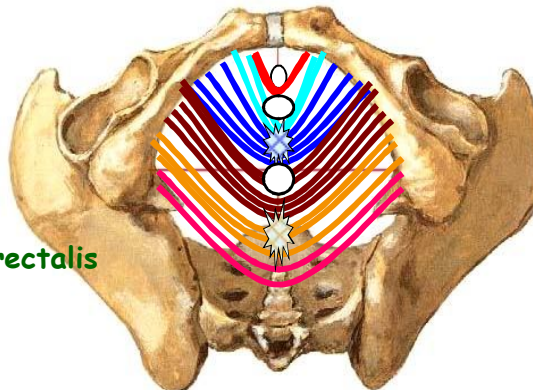
Anococcygeal body

Tip of coccyx



Parts of levator ani

1. Levator prostate
2. Pubourethralis
3. Pubovaginalis
4. Puoboanalis & Puborectalis
5. Iliococcygeus

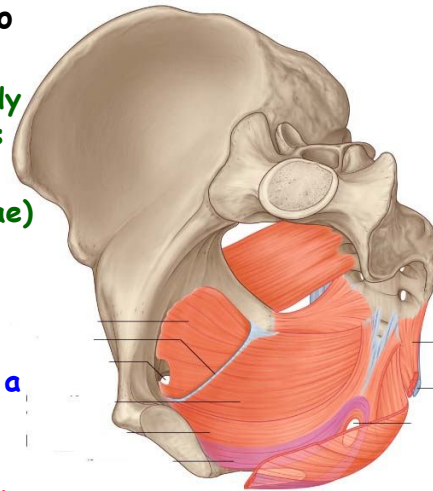


Levator ani can be divided into 3 parts:

1-Pubococcygeus: arise from body of pubis & attach as far back as coccyx. Is subdivided into:
 Puboprostaticus (levator prostatae)
 Pubovaginalis
 Puboanalis.

2-Puborectalis: from pubis form a sling around anorectal junction.

3-iliococcygeus: from white line to anococcygeal body and coccyx



Dr. Rania

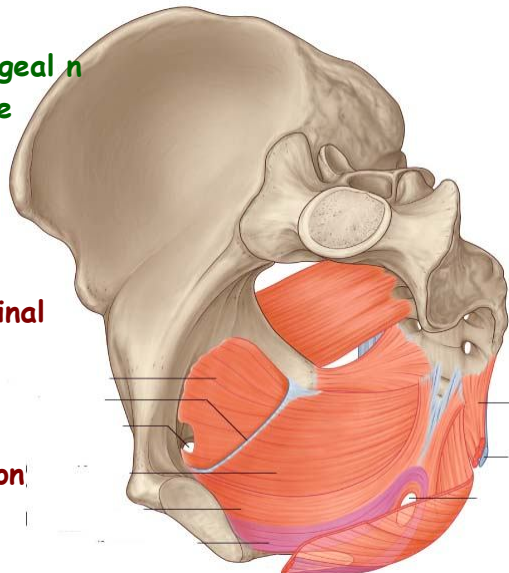
Nerve supply:

Sup: lower sacral, coccygeal n

Inf: inferior rectal nerve
 (from pudendal nerve)

Action:

1. Support pelvic viscera
2. Increase intra-abdominal pressure
3. Elevate prostate
4. Sphincter to vagina
5. Close rectoanal junction



Dr. Rania

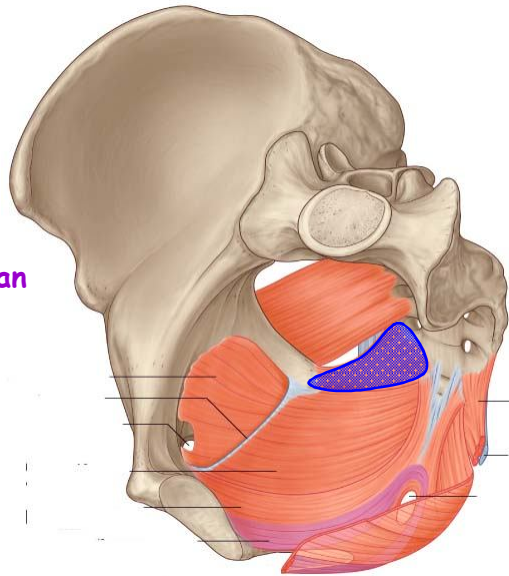
Coccygeus ms:

Origin: Ischeal spine

Insertion: last piece of
sacrum & coccyx

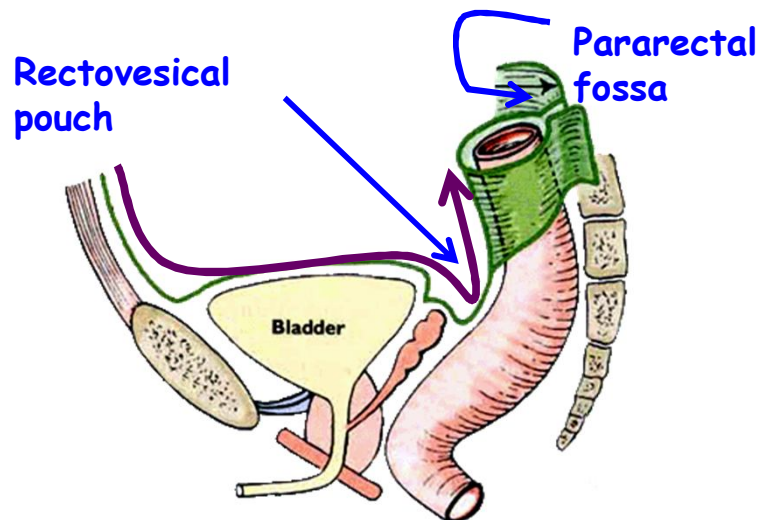
NS: lower sacral n

Action: no action in human



Dr. Rania

Peritoneal covering of pelvic organs



Dr. Rania

